

REMARKS

Reconsideration of the present application is requested.

Claims 8-10 have been canceled as being directed to a non-elected invention.

Claims 1 and 7 stand rejected over Scott et al. in view of Drake, the position being taken that it would have been obvious to arrive at the $H/D < 1.2$ feature of claims 1 and 7 by experimentation. However, there is no suggestion anywhere in Scott et al. or Drake that the ratio of H/D is of any significance. In fact, the dimensions H , D are not even referred to. It is submitted that in order for an artisan to be motivated to experiment in order to optimize a feature, it is necessary that the artisan appreciate that such a feature warrants experimentation. Nowhere would an artisan glean that fact from Scott et al. or Drake.

The present inventors have recognized the importance of the H/D feature as adapting the crushing elements to a welded type of attachment.

It is submitted that there is no motivation in Scott et al. or Drake for experimenting with the H/D feature, let alone of arriving at $H/D < 1.2$ as recited in each of claims 1 and 7.

The above comments apply equally to claim 3 which was rejected as anticipated by Scott et al., and which also recites the $H/D < 1.2$ feature.

Accordingly, it is submitted that claims 1-7 and 11-13 distinguish patentably over the applied prior art.

As regards to the objection to the drawings, numerals 1' and 12' can be found in original Figs. 2A and 2B, and numeral 12A has now been added by amendment to Fig. 1B.

Concerning the objection to the term "spigot", attention is directed to the fact that such term has a definition in addition to that provided in the Official action. With reference to the attached copy of page 1837 of The Random House Dictionary of the English Language, Second Edition, Unabridged, "spigot" is defined as "the end of a pipe that enters the enlarged end of another pipe to form a joint." The term spigot has been used in the present application to refer to the end of the crushing element that forms a joint with the cone cutter, and which might even be considered

broadly as entering the cone cutter as the result of the welding operation. Therefore, applicants would prefer to retain the term spigot, to avoid an extensive rewriting of the application in an amendment, but would be willing to change the term if the rejection is maintained.

In light of the foregoing, it is submitted that the application is in condition for allowance.

Respectfully submitted,

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SUBSTITUTE FIG. 1B

*Corrections
Approved
7/14/03 DB*

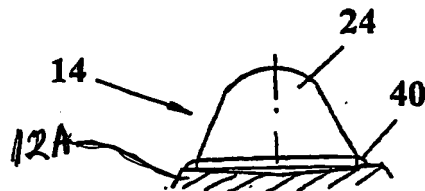


FIG. 1B

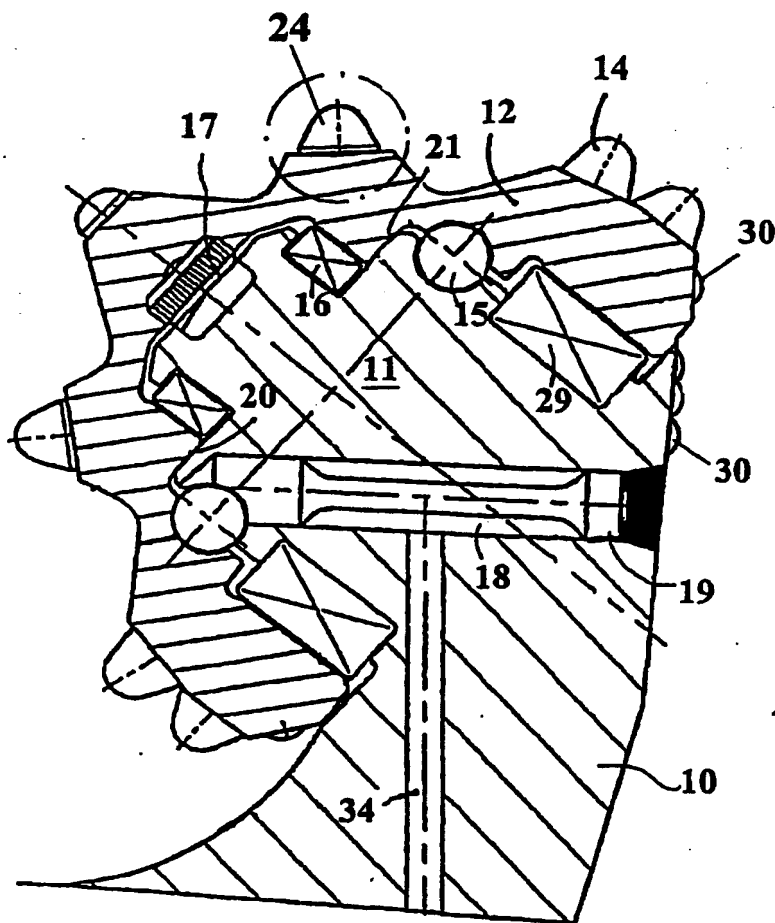


FIG. 1A



FIG. 1C

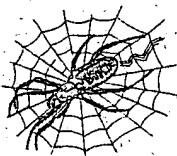
THE
RANDOM HOUSE
DICTIONARY
OF THE
ENGLISH
LANGUAGE

Second Edition

Unabridged

t serve as nests and as traps for prey. 2. (loosely) of various other arachnids resembling or suggesting se. 3. any of various things resembling or suggesting spider. 4. a frying pan, originally one with legs or t. 5. a trivet or tripod, as for supporting a pot or pan a hearth. 6. *Mach.* a. a part having a number of radiating spokes or arms, usually not connected at their ends. b. Also called **cross**, (in a universal joint) a splike part pivoted between the forked ends of two flts to transmit motion between them. 7. an evil person who entraps or lures others by wiles. 8. a device used to a cultivator, for pulverizing the soil. [bef. 0; ME *spithre*, OE *spithra*, akin to *spinnan* to SPIN; c. 1 *spinder*] —**spi/der-less**, *adj.* —**spi/der-like**, *adj.*

spider,
Argiope aurantia,
length $\frac{1}{4}$ in.
(1.9 cm)



der band, *Naut.* See **futtock band**.

der bug, See **thread-legged bug**.

der crab, any of various crabs of the family *Decapoda*, having long, slender legs and a comparatively ill, triangular body. [1700-10]

der fly, *Angling*, an artificial fly having a kle body, little or no tail, no wings, and unusually legs, dressed to resemble a spider. [1780-90]

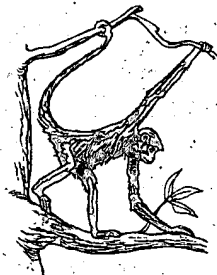
der-hunt-er (*spi/dər hun/tər*), *n.* any of several birds of the genus *Arachnothera*, of southern Asia the East Indies, having dull-colored plumage and a bill. [1855-60; SPIDER + HUNTER]

der lily, any of several plants having lilylike vers with narrow petals, as those belonging to the era *Crinum*, *Hymenocallis*, and *Lycoris*, of the ama-is family. [1885-90, Amer.]

der-ling (*spi/dər ling*), *n.* the young of a spider. **der-let** (*spi/dər lit*). [1880-85; SPIDER + IC]

der mite, any of numerous, variously colored -spinning mites of the family Tetranychidae, many which are pests of garden plants and fruit trees. [5-70]

spider monkey,
Ateles geoffroyi,
head and body
2 ft. (0.6 m),
tail $\frac{1}{2}$ ft.
(0.8 m)



der mon/key, any of several tropical American keys of the genus *Ateles*, having a slender body, slender limbs, and a long, prehensile tail: some are ingered. [1755-65]

der plant, 1. Also called **ribbon plant**, a plant, *Prophyllum comosum*, of the lily family, native to hern Africa, that has long, narrow leaves and clus-of white flowers and is widely cultivated as a house-t. 2. cleome. [1850-55]

spider plant,
*Chlorophyllum
comosum*



der wasp, any of certain wasps, esp. of the fam-omplidae, that provision their nests with paralyzed ers. [1810-20]

der web, the web that is spun by a spider, made terlaced threads of viscous fluid that harden on ex-re to air. Also, **spi/der's web**. [1525-35]

ler-web (*spi/dər web*), *v.t.* -webbed, -web-bing-ver with a spider web or fine lines resembling a spi-web. [1890-95; v. use of SPIDER WEB]

ler-wort (*spi/dər wɜrt*), (*-wɜrt*), *n.* 1. any plant e genus *Tradescantia*, having blue, purple, or rose-ed flowers. 2. any of several related plants. [1590-; SPIDER + WORT]

ler-y (*spi/də rē*), *adj.* 1. like a spider or a spider's 2. full of spiders. [1830-40; SPIDER + Y]

ple to a movie, a sale, etc.; pitch. —*v.i.* 2. to speak ex-travagantly. [1890-95; (n.) < G *spielen* or Yiddish *shpil* play, game; (v.) < G *spielen* or Yiddish *shpiln* to play, gamble]

Spiegel-berg (*spēl/bürg*), *n.* Steven, born 1947, U.S. film director, writer, and producer.

spiel-er (*spēl/ər*), *n.* 1. a barker, as at a circus side-show. 2. a person with an extravagant line of talk. 3. Austral. a swindler. 4. Slang. an announcer for radio or television, esp. one who gives commercials. [1885-90; < G; see SPIEL, -ER]

spi-er (*spi/ər*), *n.* a person who spies, watches, or dis-covers. [1225-75; ME; see SPY, -ER]

spier (*spēr*), *v.i.*, *v.t.* spear.

spiff (*spif*), *v.t.* Informal. to make spiffy (usually fol. by up): Let's spiff up this office with new furniture. [1875-80; perh. v. use of dial. spiff well-dressed; see SPIFFY]

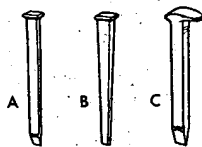
spiff (*spif*), *Slang.* —*n.* 1. a bonus or other form of remuneration given to retail salespeople for promoting the products of a particular manufacturer. —*v.t.* 2. to reward (a salesperson) with a spiff. [1855-60; orig. un-cert.]

spiff-y (*spif/ē*), *adj.* **spiff-i-er**, **spiff-i-est**. Informal. spruce; smart; fine. Also, **spif-fling** (*spif/ing*): esp. Brit. **spivvy**, **spivving**. [1855-60; dial. spiff well-dressed (orig. uncert.) + -y] —**spiff-i-ly**, *adv.* —**spiff-i-ness**, *n.*

spig-ot (*spig/ət*), *n.* 1. a small peg or plug for stopping the vent of a cask. 2. a peg or plug for stopping the pas-sage of liquid in a faucet or cock. 3. a faucet or cock for controlling the flow of liquid from a pipe or the like. 4. the end of a pipe that enters the enlarged end of another pipe to form a joint. [1350-1400; ME *spigot*, perh. < OF **espigot* < OF *espiga* (< L *spica* ear of grain; see SPICA) + OF -ot dim. suffix] —**Regional Variation**. 3. See **faucet**.

spik (*spik*), *n.* spic.

spikes
(def. 1)
A, large spike;
B, large cut
nail; C, track
spike



spike (*spik*), *n.*, *v.* **spiked**, **spik-ing**. —*n.* 1. a naillike fastener, 3 to 12 in. (7.6 to 30.5 cm) long and proportion-ately thicker than a common nail, for fastening together heavy timbers or railroad track. 2. something resembling such a nail; a stiff, sharp-pointed piece or part: to set spikes in the top of a cement wall. 3. a sharp-pointed piece of metal set with the point outward, as on a weapon. 4. an abrupt increase or rise: a chart showing a spike of unusual activity in the stock market; a sudden spike of electrical current. 5. a rectangular or naillike metal projection on the heel and sole of a shoe for im-proving traction, as of a baseball player or a runner. 6. spikes, a pair of shoes having such projections. 7. the unbranched antler of a young deer. 8. Bot. a flower stalk. See illus. under **inflorescence**. 9. a pointed por-tion of a continuous curve or graph, usually rising above the adjacent portion: a spike in the value of the voltage. 10. Volleyball. a hard smash, hit close to the net, almost straight down into the opponent's court. 11. Slang. a hypodermic needle. —*v.t.* 12. to fasten or secure with a spike or spikes. 13. to provide or set with a spike or spikes. 14. to pierce with or impale on a spike. 15. to set or stud with something suggesting spikes. 16. to in-jure (another player or a competitor) with the spikes of one's shoe, as in baseball. 17. Volleyball. to hit (a ball in the air) with a powerful, overarm motion from a position close to the net so as to cause it to travel almost straight down into the court of the opponents. 18. Football. to slam (the ball) to the ground in the end zone, after scor-ing a touchdown. 19. to render (a muzzle-loading gun) useless by driving a spike into the touchhole. 20. to make ineffective; frustrate or thwart: to spike a rumor; to spike someone's chances for promotion. 21. Informal. a. to add alcoholic liquor to (a drink). b. to add (a chemi-cal, poison, or other substance) to: The cocoa was spiked with cyanide. 22. Journalism Slang. to refuse (a story) by or as if by placing on a spindle. —*v.i.* 23. to rise or increase sharply (often fol. by up): Interest rates spiked up last week. 24. spike someone's guns. See **gun** (def. 10). [1300-50; ME *spike* (< n.) < ON *spikr* nail; akin to ON *spik*, MLG *spiker* nail] —**spike/like**, *adj.*

spike (*spik*), *n.* 1. an ear, as of wheat or other grain. 2. Bot. an inflorescence in which the flowers are without a stalk, or apparently so, along an elongated, unbranched axis. See illus. under **inflorescence**. [1350-1400; ME; prob. special use of SPIKE, influenced by L *spica* ear of grain]

spike-dace (*spik/dās*), *n.*, *pl.* -dace-es, (esp. collec-tively) -dace. a scaleless, mottled, olive-brown fish, *Meda fulgida*, of the Gila River system in New Mexico and Arizona, having two dorsal spines. [SPIKE + DACE]

spike/ heath, a Eurasian evergreen shrub, *Bruckner-thalia spiculifolia*, of the heath family, having narrow leaves and bell-shaped, pink flowers, growing in gritty soil.

spike/ heel, a very high heel that tapers to a narrow base, used on women's shoes. [1925-30]

spike/ lav/ender, a lavender, *Lavandula latifolia*, having spikes of pale-purple flowers, and yielding an oil

spike-nard (*spik/nərd*, -nərd), *n.* 1. an aromatic, In-dian plant, *Nardostachys jatamansi*, of the valerian fam-ily, believed to be the nard of the ancients. 2. an aro-matic substance used by the ancients, supposed to be obtained from this plant. 3. any of various other plants, esp. an American plant, *Aralia racemosa*, of the ginseng family, having an aromatic root. [1300-50; ME < ML *spica nardi*. See SPIKE, NARD]

spik-er (*spi/kər*), *n.* 1. a pointed, perforated tube con-nected to a garden hose, pushed into the soil for deep watering. 2. Volleyball. a player who spikes or who ex-cels at spiking. [SPIKE + -ER]

spike-tooth har/row (*spik/tōoth/*), a harrow equipped with straight teeth on horizontal bars, usually employed to smooth and level plowed soil or seedbeds for planting or sowing. [1925-30]

spik-y (*spi/kē*), *adj.* **spik-i-er**, **spik-i-est**. 1. having a spike or spikes. 2. having the form of a spike; spikelike. 3. acid or peevish in temper or mood; prickly. [1570-80; SPIKE + -y] —**spik-i-ly**, *adv.* —**spik-i-ness**, *n.*

spile (*spil*), *n.*, *v.* **spiled**, **spil-ing**. —*n.* 1. a peg or plug of wood, esp. one used as a spigot. 2. a spout for conducting sap from the sugar maple. 3. a heavy wooden stake or pile. 4. Mining. forepole. —*v.t.* 5. to stop up (a hole) with a spile or peg. 6. to furnish with a spigot or spout, as for drawing off a liquid. 7. to tap by means of a spile. 8. to furnish, strengthen, or support with spiles or piles. [1505-15; < MD or MLG *spile* splin-ter, peg; c. G *Speil*]

spile (*spil*), *v.t.*, *v.i.* **spiled**, **spil-ing**, *n.* Dial. spoil.

spil-ing (*spil/ing*), *n.* a group or mass of piles; spiles. [1835-45; SPILE + -ING]

spill (*spil*), *v.* **spilled** or **spilt**, **spill-ing**, *n.* —*v.t.* 1. to cause or allow to run or fall from a container, esp. acci-dentally or wastefully: to spill a bag of marbles; to spill milk. 2. to shed (blood), as in killing or wounding. 3. to scatter: to spill papers all over everything. 4. Naut. a. to let the wind out of (a sail). b. to lose (wind) from a sail. 5. to cause to fall from a horse, vehicle, or the like: His horse spilled him. 6. Informal. to divulge, disclose, or tell: Don't spill the secret. 7. spill the beans. See **bean** (def. 9). —*v.i.* 8. (of a liquid, loose particles, etc.) to run or escape from a container, esp. by accident or in careless handling. —*n.* 9. a spilling, as of liquid. 10. a quantity spilled. 11. the mark made by something spilled. 12. a spillway. 13. Also called **spill/ light**, superfluous or useless light rays, as from theatrical or photographic lighting units. 14. Theat. an area of a stage illuminated by spill light. 15. a throw or fall from a horse, vehicle, or the like: She broke her arm in a spill. [bef. 950; 1920-25 for def. 6; ME *spillen* to kill, destroy, shed (blood), OE *spillan* to kill; c. MHG, MD *spillen*; akin to SPILL] —**spill-a-ble**, *adj.*, *n.*

spill (*spil*), *n.* 1. a splinter. 2. a slender piece of wood or of twisted paper, for lighting candles, lamps, etc. 3. a peg made of metal. 4. a small pin for stopping a cask; spile. 5. Mining. forepole. [1250-1300; ME *spille* < ?]

spill-age (*spil/ij*), *n.* 1. the act or process of spilling. 2. an amount that spills or is spilled. [1920-25; SPILL + -AGE]

spill-i-kin (*spil/i kin*), *n.* 1. a jackstraw. 2. spillikins, (used with a singular v.) the game of jackstraws. Also, **spilkin**. [1725-35; var. of *spilican* < obs. D *spilleken*, equiv. to *spelle* peg, pin + *-ken* -KIN]

spill-o-ver (*spil/əvər*), *n.* 1. the act of spilling over. 2. a quantity of something spilled over; overflow. [1940-45; n. use of v. phrase *spill over*]

spill-proof (*spil/prūf*), *adj.* (of a container) designed to prevent spilling. [SPILL + -PROOF]

spill-way (*spil/wā*), *n.* a passageway through which surplus water escapes from a reservoir, lake, or the like. [1885-90; SPILL + WAY]

spilt (*spilt*), *v.* a pt. and pp. of **spill**.

spilth (*spilth*), *n.* 1. spillage (def. 1). 2. something that is spilled. 3. refuse; trash. [1600-10; SPILL + -TH]

spin (*spin*), *v.* **spun** or (Archaic) **span**, **spun**, **spin-ning**, *n.* —*v.t.* 1. to make (yarn) by drawing out, twisting, and winding fibers: Pioneer women spun yarn on spinning wheels. 2. to form (the fibers of any material) into thread or yarn: The machine spins nylon thread. 3. (of spiders, silkworms, etc.) to produce (a thread, cobweb, gossamer, silk, etc.) by extruding from the body a long, slender filament of a natural viscous matter that hard-ens in the air. 4. to cause to turn around rapidly, as on an axis; whirl; whirl: to spin a coin on a table. 5. Informal. to play (phonograph records): a job spinning re-cords on a radio show. 6. Metalworking. to shape (sheet metal) into a hollow, rounded form by pressure from a tool while rotating the metal on a lathe or wheel. 7. to produce, fabricate, or evolve in a manner suggestive of spinning thread: to spin a tale of sailing ships and by-gone days. 8. Rocketry. to cause intentionally (a rocket or guided missile) to undergo a roll. 9. to draw out, pro-tract, or prolong (often fol. by out): He spun the project out for over three years. 10. Brit. to flunk a student in an examination or a term's work. —*v.i.* 11. to revolve or rotate rapidly, as the earth or a top. 12. to produce a thread from the body, as spiders or silkworms. 13. to produce yarn or thread by spinning. 14. to move, go, run, ride, or travel rapidly. 15. to have a sensation of whirling; reel: My head began to spin and I fainted. 16. to fish with a spinning or revolving bait. 17. **spin off**, a. to create something new, as a company or assets, without detracting from or affecting the relative size or stability of the original: After the acquisition, the com-pany was required to spin off about a third of its assets. b. to derive from or base on something done previously: